

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in this application. Please cancel claims 6, 8-11, 16, 18-21, 23, 27, 29, and 31-35, without prejudice or disclaimer, and add new claims 36-44, as follows:

1-35. (Canceled).

36. (New) An electrode comprising:

a base metal formed of a cast metal;

a heater embedded in the base metal and arranged on a plane; and

at least one core metal plate embedded in the base metal and arranged

substantially parallel to the plane and adjacent to the heater,

wherein the heater and the core metal plate are cast in the base metal such

that the core metal plate is entirely surrounded by the base metal and is

entirely in metal-to-metal contact with the base metal, and

wherein a material forming the core metal plate has a rigidity higher than that

of a material forming the base metal.

37. (New) The electrode according to claim 36, wherein the core metal plate has a plurality of through holes, which are filled with the base metal so that the base metal above the core metal plate and the base metal below the core metal plate are bound together via the base metal filled in the through holes.

38. (New) The electrode according to claim 37, wherein each of the through holes has a diameter ranging from about 0.1 mm to about 10 mm.
39. (New) The electrode according to claim 36, wherein the core metal plate is made of stainless steel, and the base metal is made of aluminum.
40. (New) The electrode according to claim 36, wherein the core metal plate has a thickness ranging from about 1 mm to about 2 mm.
41. (New) The electrode according to claim 36, wherein said at least one core metal plate comprises two core metal plates arranged above and below the heater, respectively.
42. (New) The electrode according to claim 36, wherein the core metal plate is disk-shaped.
43. (New) The electrode according to claim 36, wherein the material forming the core metal plate has a softening temperature higher than that of the material forming the base metal
44. (New) A plasma processing apparatus comprising:
  - a processing vessel;
  - the electrode as defined in claim 1; and

a high frequency power source adapted to apply a high frequency voltage to the electrode.